

Metapsaenythia, a New Panurgine Bee Genus (Hymenoptera, Andrenidae)¹

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ABSTRACT

The new genus *Metapsaenythia* is based on *Calliopsis abdominalis* Cresson, and includes *M. sonorana*, a new species from Sonora.

A new genus is being based on *Calliopsis abdominalis* Cresson, which is a common and well known species of the United States from Kansas and Texas eastward to the Atlantic coast. One other species is included, represented, unfortunately, by only one female from Sonora, Mexico.

The species *abdominalis* remained in *Calliopsis* for many years, but was removed to *Pseudopanurgus* in 1937, and later to the subgenus *Heterosarus* by Michener. At one time, also, it was thought by Cockerell, to belong through its synonym in the genus *Camptopoeum*, with which it certainly has some resemblance. Although *Pseudopanurgus*, in a broad sense, including the segregated group *Heterosarus*, was derived probably from *Psacnythia*-like ancestral stock, it seems likely that *Metapsaenythia* is a more recent development from *Protandrena*, with which it shares certain characters.

METAPSAENYTHIA, NEW GENUS

Description.—Wings with two submarginal cells, the second narrowed about one-half, or less, above and receiving first recurrent nervure about one-fifth of its length from base, rarely in some cases closer to base than second from apex. Pterostigma narrow, four or more times longer than wide. Marginal cell reaching halfway from stigma to apex of wing. Tibial scope of female thin and short, the hairs simple. Female with well-developed yellow or whitish face marks of the pattern seen in *Protandrena*. Males (as far as known) with face yellow below level of antennae. Abdomen of male slender, elongate, three or more times longer than wide. Apical depression of tergites strong, but only moderately wide, and basal impression moderately developed. Two apical lobes of seventh sternite narrow, acute at apex, with their tips curved outward. Eighth sternite (subgenital plate) of the general type seen in *Protandrena* and *Pseudopanurgus*, longer than wide, gently deflexed from its base, with parallel or diverging keels on dorsal surface and rounded at apex. Genital armature with gonocoxites separate from base and tapering into the fused gonostyli (parameral lobes); sagittae (penis valves) fused, or only briefly divided at apex, depressed, broader than parameral lobes and almost as long.

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Type of genus.—*Calliopsis abdominalis* Cresson.

KEY TO SPECIES OF METAPSAENYTHIA

Female with frons, vertex and mesonotum finely and densely punctured; black, with scutellum, metanotum, posterior face of propodeum and abdomen more or less completely ferruginous; large mark on face below antennae, not reaching margin of eyes but leaving anterior part of clypeus dark, and tubercles yellow (males similar, with face below level of antennae yellow).....**abdominalis** (Cresson)

(The subspecies *tricolor* differs in lacking most or all of the ferruginous color.)

Shining black, sparsely punctured; head much broader than long; transverse mark on lateral extensions of clypeus, transverse band above clypeus, tubercles and interrupted band on hind margin of pronotum creamy white; punctures of mesonotum faint, minute and close, with distinctly larger, but still small punctures sparsely interspersed.....**sonorana**, new species

Metapsaenythia abdominalis abdominalis (Cresson)

Calliopsis abdominalis Cresson, 1878, Trans. American Ent. Soc. 7: 68, ♀.

♂: Crawford, 1915, Proc. United States Nat. Mus., 48: 578.

Camptopocum semirufum Cockerell, 1937, American Mus. Novitates, 817: 1, ♀.

Pseudopanurgus abdominalis Michener, 1937, Ann. Mag. Nat. Hist. (16) 19: 321.

Pseudopanurgus (Heterosarus) abdominalis abdominalis Michener, 1951, Hym. America, Syn. Cat., p. 1098.

This is a common species in Kansas and Texas and I have examined over three hundred specimens, many of them from flowers of *Monarda*, from which the females collect pollen. Some specimens were collected at flowers of *Helianthus annuus*, *Dalea aurca*, *Brazoria truncata*, *Aster tanacetifolius* and *Gaillardia*.

Metapsaenythia abdominalis tricolor (Cockerell)

Calliopsis abdominalis Fox, 1892, Entom. News, 3: 29; Bradley, 1943, Ent. News, 53: 190.

Calliopsis tricolor Cockerell, 1897, Trans. American Ent. Soc.: 151, ♀.

Pseudopanurgus (Heterosarus) abdominalis tricolor Michener, 1951, Hym. American, Syn. Cat. p. 1099; Mitchell, 1960, Bees Eastern United States, 1: 270.

This is merely a dark color form of *abdominalis* and is known from New Jersey and Pennsylvania south to North Carolina and Georgia.

Metapsaenythia sonorana, NEW SPECIES

This is a small, but robust bee, with a very broad head, a transverse white band on face below antennae, white marks on disk of pronotum and tubercles, and a very minutely punctured and shining mesonotum.

Female.—Black, shining; transverse mark on lateral extensions of clypeus, transverse supraclypeal mark rounded above, nearly circular subantennal marks, broadly interrupted band on hind margin of disk of pronotum and mark on tubercles creamy white. Thorax and abdomen otherwise dark, except sternite 6 testaceous brown. Legs dark, small mark at apex of front femora on anterior side, anterior side of front tibiae except at apex, and small spot at base of middle tibiae creamy white; small joints of front tarsi and spurs of middle and hind tibiae brown. Antennae black, flagellum more brown above and broadly reddish brown beneath. Mandibles dark red at apex, shading into rufotestaceous at middle and becoming fuscous at base. Proboscis black. Tegulae testaceous but fuscous on inner margin and with a white mark on nearly anterior half but not quite reaching outer margin. Wings brownish subfuliginous, nervures pale ferruginous, subcosta and margins of stigma infuscated.

Head much broader than long, inner orbits somewhat divergent above. Cheeks strongly receding, less than half as wide as eyes. Posterior ocelli slightly less than their distance apart from occipital margin and slightly more than same distance from nearest eye. Facial foveae slightly less than their own width from margin of eyes and about as long as space between posterior ocelli. Antennae inserted well below middle of face, reaching nearly to tegulae and with middle joints of flagellum somewhat thicker than long. Face depressed from level of ocelli to just below antennae, but clypeus strongly convex from side to side. Subantennal plates barely longer than wide, with inner suture much shorter than outer or the oblique anterior suture. Supraclypeal area much broader than high with its pale mark intruding between antennal sockets. Disk of clypeus nearly twice as broad as high, broadly rounded above, very obtusely angled on each side of the base of labrum, and with lateral extensions broadly inflexed and partly visible in frontal aspect. Labrum very large and both it and its process much broader than long; anterior border rather broadly finely rugose, but process polished, concave at middle and gently rounded across apex. Mandibles stout, acute, nearly reaching far margin of labrum. Proboscis moderately long, galeae nearly reaching base of stipes; first joint of labial palpi longer than next three joints together. Pterostigma slender, about five times longer than wide and about half as wide as first submarginal cell; second submarginal cell narrowed more than one-half above and receiving first recurrent nervure about one-seventh of its length from base and second one-sixth from apex. Abdomen ovate, about twice as long as wide, convex above; pygidial plate, except for well-rounded apex, concealed in type. Calcar of middle tibiae very slender, slightly curved and about three-fourths as long as basitarsus; calcaria of hind tibiae minutely serrate. Tarsal claws with small inner tooth. Head and thorax smooth, shining, very finely punctured; punctures of frons and vertex mostly well separated, those of clypeus somewhat coarser and closer and those of cheeks finer. Mesonotum very minutely, rather closely punctured, with somewhat

larger punctures sparsely interspersed; mesoplura densely and finely punctured. Propodeum smooth, minutely punctured; basal area narrow and minutely rugulose. Abdomen slightly dull, very minutely shagreened or lineolate, and with moderately close minute punctures; apical depression of tergites narrow, not differing much from disk in sculpture except on tergite 1; basal impression of tergite 2 a narrow shining groove. Pubescence of face, cheeks and sides of thorax short, thin, erect and whitish, but mesonotum almost bare. Abdomen with very fine short, appressed hair, even on apical depression of tergites (except of first); apical fimbria ochraceous, rather dense but short; hair of venter erect, most evident on sternite 5. Scopal hair of hind tibiae very thin, shorter than greatest width of segment, but with somewhat longer hairs on outer margin very minutely plumose. Length, 5.5 mm; anterior wing, 4.8 mm; width of head, 2.3 mm.

Holotype.—Female, Oroz, Sonora, Mexico, on *Tidestromis lanuginosa*, Sept. 17, 1957 (Timberlake).

Type in collection of the University of California, Riverside.

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University and to be near the members of his family who reside in and near Worcester.

During his long association with Cornell and the Department of Entomology he made many contributions to the departmental library and the collections. He spent a considerable sum of his personal money on building the Lepidoptera collection. His final gesture upon leaving Cornell was a substantial gift to the Department of Entomology to be used for graduate students and projects related to their work.

He was very much interested in the geographical distribution and Classification of the Lepidoptera, especially the butterflies of the American tropics. In pursuing these studies he made two long trips to South America in 1920 and 1927 and a shorter trip to the island of Puerto Rico in 1930.

He was the last of the great general workers in the Lepidoptera, and his command of the field was unrivalled. There was no area upon which he had not read and upon which he had not formed opinions. He published approximately 150 scientific papers; the majority were on the morphology and classification of the butterflies and moths. His outstanding contribution in this area was the work already referred to, "Lepidoptera of New York and Neighboring States." He also published some noteworthy and basic contributions on the wing venation and wing folding of the Coleoptera. His interests outside of entomology were many; two were the psychology of color vision, on which he published, and the archaeology of the Near East.

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